Per Ostmo: Hello everyone, and welcome to the Rural Health Research Gateway webinar on HIV and Hepatitis C in Rural Areas: Prevalence, Service Availability, and Challenges. My name is Per Ostmo and I am the outreach specialist for Gateway. The Rural Health Research Gateway provides easy and timely access to research conducted by the Rural Health Research Centers funded by the Federal Office of Rural Health Policy. Following today's presentation, I will provide a brief demonstration of how to access research on Gateway.

We've muted all lines, but I encourage you to use the chat box at the bottom of your screen to type any questions you may have. Our presenters today are Dr. Katherine Ahrens and Amanda Burgess of the Maine Rural Health Research Center. They will be highlighting recent work on HIV prevalence and maternal hepatitis C in rural areas across the U.S. They will also discuss challenges and promising practices in addressing HIV and hepatitis C outbreaks in rural areas. And now I'll pass it over to Dr. Ahrens.

Katherine Ahrens: Okay, great. Thank you so much, Per. Good afternoon, everyone. Thank you for attending this Gateway webinar titled HIV and Hepatitis C in Rural Areas: Prevalence, Service Availability, and Challenges. My name is Kate Ahrens, and I'm a faculty member at the University of Southern Maine. I am presenting today with Amanda Burgess, who is also from the University of Southern Maine. We both conduct research for the Maine Rural Health Research Center.

And here's an overview of our presentation today. We will be discussing three recent projects related to HIV and hepatitis C in rural areas in the U.S. I will discuss the first two projects, which are maternal hepatitis C prevalence by county in the U.S, and HIV prevalence and HIV service availability by county level rurality in the U.S. Amanda will then discuss the third project, which is challenges and promising practices of rural public health in addressing HIV and hepatitis C. These projects were funded by a cooperative agreement between the University of Southern Maine and the U.S. Federal Office of Rural Health Policy.

Okay, now turning to project one, maternal HCV prevalence. As a bit of background, the CDC published recommendations in April 2020 that all pregnant women be screened for HCV during each pregnancy, except in settings where the prevalence of HCV infection is less than .1%. These recommendations point to the need for local estimates of HCV prevalence to guide screening protocols. Our research questions were: What is the prevalence of maternal HCV by county across the U.S.? And is maternal HCV prevalence higher in rural counties as compared to urban counties? This study was recently published in the American Journal of Preventive Medicine.

We used national birth certificate data for the U.S. for the years 2010 through 2018. The revised 2003 version of the U.S. birth certificate added a checkbox to indicate maternal HCV infection during pregnancy. There was staggered adoption of the revised birth certificate over time, with most states adopting that revision by 2010 and all states as of 2016. We applied for and were granted

access to restricted use data, which included information on the county of maternal residence for each live birth.

In order to use these data for research purposes, we signed a data use agreement saying we would not present estimates based on fewer than 10 observations. In practice, however, a common rule of thumb is to not present results based on fewer than 20 observations because they are not reliable. We categorized maternal county of residence by the six level National Center for Health Statistics, NCHS, Urban-Rural Classification Scheme for Counties, using the 2013 version.

Then we used a type of spatial modeling to estimate maternal HCV prevalence for every county in the U.S. We used small area estimation modeling. These models were previously used by Dr. Lauren Rossen, my co-author, to estimate other health outcomes with small numbers of observations in low population counties. Specifically, we used Hierarchical Bayesian models with spatiotemporal random effects. These models estimated smoothed county level HCV prevalence across the U.S., borrowing strength from adjacent counties in years to stabilize estimates. These methods allow for HCV prevalence estimation even when there are small numbers of HCV cases found in low population counties each year. We used an R package for this modeling and to create the maps based on the observed and modeled estimates.

And here are the results. This descriptive table shows maternal characteristics by the six level county rurality variable. Our analysis included over 32 million births during 2010 to 2018, of which 8.3% were in micropolitan rural counties, and 5.3% were in noncore rural counties. Average maternal age at birth was lowest for the most rural counties at just under 27 years, with around 9% of births among teenagers. This is higher than that for the urban counties. The proportion of births to non-Hispanic White mothers was highest for the two most rural counties, at over 72%.

The two most rural counties had the lowest proportion of births to mothers with a bachelor's degree or higher, less than 20%, the highest proportion of births with Medicaid as the expected source of payment for the delivery, nearly 50%, and the highest proportion of births to women who smoked during pregnancy, around 16%. In terms of county-level characteristics, the two most rural counties had the greatest proportion of births to women living in high poverty counties. County drug overdose death rates were high in the two most rural counties but were similar to those in the large fringe metro and medium metro counties, which were classified as urban.

And here are the observed data for the mean maternal HCV prevalence by county-level rurality per 1,000 births from 2010 to 2018. Overall prevalence of HCV during the study period was 3.5 per 1,000 births, so .35%, an increase from 2.0 to 5.0 per 1,000 births from 2010 to 2018. As you can see, the mean HCV prevalence was consistently higher across 2010 to 2018 in rural counties, shown

on the right in shades of blue, as compared to urban counties, shown in the other colors to the left.

And here is a map just showing the counties with 20 or more maternal HCV cases in 2018. The counties with the highest mean prevalence are shown in red, and those with the lowest prevalence are shown in yellow. The gray counties are the areas for which estimates could not be reliably generated. Therefore, observed data are only available for 7.7% of all counties in the U.S. and less than 1% of rural counties. This is the map that you would get just using the observed data. Data are suppressed for the vast majority of counties due to small counts.

And here are the results of Bayesian analysis showing modeled HCV prevalence for every county in the U.S. These data are for the year 2016, the first year where there was complete adoption of the revised birth certificate with the HCV checkbox added. The same color scale was applied here. Again, yellow indicates low prevalence areas and the darkest red indicates the highest prevalence areas.

Next, I'll show you maps for the years 2017 and 2018, so you can see how maternal HCV prevalence changed over time. As part of publishing our paper, we included a supplemental Excel file with estimates of HCV prevalence for each county in the U.S. for the years 2016 to 2018. Those estimates are the same ones that were used to generate this map.

In year 2017, some areas got darker, particularly the edges of the areas that were already dark. And the same thing occurred for the years 2018. And I'll just show it to you again more quickly, so you can see the changes. Okay, so for me when I look at that, I notice the changes most in the western half of the U.S. becoming darker over time. And here's a map just showing the counties in the top 10th percentile of the modeled estimates for the year 2018. As you can see, the red areas overlap with Appalachia, northern New England, along the northern border in the Upper Midwest and parts of New Mexico and other smatterings across the U.S.

We also collapsed the data, comparing all county types to the most urban county type, large central metro counties. Using the observed data, HCV prevalence ranged from 2.4 per 1,000 births in large central metro counties to 9.1 per 1,000 births in noncore counties. In the two most rural counties, the prevalence of maternal HCV was 3.54 to 3.82 times as high as the prevalence in large central metro counties. Using the modeled data, we had very similar findings. However, the prevalence estimates were somewhat attenuated for the two rural county levels.

Okay. In conclusion, using this small area estimation method, we were able to generate maternal HCV prevalence estimates for every county in the country. These estimates can be used to help inform which areas need universal testing of pregnant women. However, birth certificate data on maternal HCV infection are most likely under-reported due to the current lack of universal testing. And

it is unknown what type of HCV test was used for the birth certificate reporting. The CDC recommendations are based specifically on HCV RNA test positivity rates.

All right. Now onto project two, HIV prevalence. Our goal here was to estimate county level HIV prevalence for every county in the U.S. We began with the state- and county-level HIV prevalence estimates released by CDC's AtlasPlus. We used the most recent data available from 2016. AtlasPlus uses data from the National HIV Surveillance System, which aggregates data from all 50 states, D.C., and six U.S. dependent areas. HIV prevalence was defined as all persons aged 13 and older living with a diagnosed HIV or AIDS as of the end of 2016. The most recent known address as of December 31, 2016, was used to assign persons to specific geographic areas. These findings were published as a chartbook, which is available on the Rural Health Research Gateway.

And here is a map of HIV prevalence by state in 2016, as published by AtlasPlus. This map shows higher HIV prevalence in dark blue in the Southeast, New York, Maryland, D.C., Delaware, Puerto Rico, and the U.S. Virgin Island. There is lower HIV prevalence in yellow in the Northern Plains, New Hampshire, West Virginia, Alaska, and some dependent areas. And here are the county-level HIV prevalence estimates for 2016, as published by AtlasPlus. In order to protect personal privacy and to prevent revealing information that may identify specific individuals, small data values were suppressed if population denominator was less than 100 or the total case count was one to four.

Suppression rules were also based on data rerelease agreements between the CDC and local HIV surveillance programs. Here you can see there were a lot of counties with data not available or suppressed, particularly in states with large rural populations, such as in the Northern Plains, the Midwest and the West. Sorry. Okay. This figure shows the percentage of counties with suppressed HIV prevalence data in AtlasPlus by level of rurality according to the National Center of Health Statistics Six-Level Urban-Rural classification scheme that I have previously mentioned.

Here, the four urban levels are shown as U1 through U4. And the two rural levels are shown as R1 and R2. Overall, only 6% of urban counties had suppressed data compared to 26% of rural counties. Among the most rural counties, 34% had suppressed data, which is not surprising because rural counties are more sparsely populated. Okay.

There as an additional data issue we encountered in this project, missing HIV cases. For example, here is Pennsylvania, shown at the top in an AtlasPlus map and below in an AIDSVu map, which uses data from AtlasPlus. Of the 67 counties in Pennsylvania, HIV prevalence estimates were published in AtlasPlus for 61 counties in 2016. However, the total HIV case count in this state was around 35,000, whereas the sum of the HIV case count from the counties was much lower, only 22,000 cases, only 63% of the total state cases. The reason for this is because even though HIV prevalence data may be published by AtlasPlus

for a given county, some estimates at the county level are based on incomplete data, due to not being able to attribute some HIV cases to a specific county of residence within the state.

Therefore, summing up county-level HIV cases for Pennsylvania results in a severe undercount of the HIV cases in the state, which you can see clearly in the map, particularly in the AIDSVu map on the bottom. That shows Pennsylvania as having a much lower HIV prevalence than the surrounding areas, visually highlighting this data problem. To correct for these two issues, we turned to the state-produced HIV surveillance reports for 2016 that were available online. We sequentially used five different methods to calculate county-level HIV prevalence estimates. Briefly, these methods used HIV cases and rate data published by states to fill in the missing and incomplete county-level data from AtlasPlus.

For some counties, we imputed counts of one when counts of one through four were suppressed. Our goal was to obtain county-level estimates for each state that summed to within plus or minus 10% of the total AtlasPlus HIV case counts for that state in 2016. Using our methodology, we achieved that goal for nearly all states. Here are the HIV prevalence estimates for rural counties, urban counties, and all counties within each state in 2016. As you can see, for most states, the rural HIV prevalence was lower than the urban HIV prevalence. But for two states, Hawaii and South Carolina, rural HIV prevalence was higher than urban HIV prevalence.

And here is a map of HIV prevalence by county using our methodology. Counties shaded green are rural, and counties shaded blue are urban. Counties with darker shading have higher HIV prevalence. Many of the rural and urban counties in the top tertile of HIV prevalence are concentrated in the South. Overall, urban counties had more than twice the prevalence of HIV as compared with rural counties, at 399 versus 149 per 100,000 population.

So in conclusion, urban HIV prevalence was higher than rural county-level HIV prevalence in all but two states, South Carolina and Hawaii. We showed that suppressed data can be addressed by a variety of methods, for example, by using state-reported estimates to fill in missing data if national data are suppressed and by imputing suppressed counts with values of one.

Okay. Moving on to the second part of project two, we also assessed HIV service availability. A research question was: What is the availability of HIV prevention, testing, and treatment services by rurality of county and U.S. census region? We obtained 2019 geocoded data from the CDC's National Prevention Information Networks Organization Database, abbreviated NPIN. This database includes approximately 12,000 organizations that provided at least one of 16 services related to HIV, AIDS, viral hepatitis, and sexually transmitted diseases that year. Organizations include AIDS service organizations, clinics, hospitals, public health departments, social services organizations, and others.

We linked the geocoded data to the 2013 National Center for Health Statistics six-level urban-rural classification scheme that I've mentioned previously and categorized organizations as located in urban or rural counties. We considered findings to be statistically significant if the P values were less than .05. Okay, so first we looked in aggregate at whether rural counties had any of the following HIV services available, which included HIV AIDS prevention education, preexposure prophylaxis, known as PrEP, post exposure prophylaxis, known as PEP, medical services for HIV AIDs, PrEp navigation, and four types of HIV testing, conventional or rapid testing, and tests performed on blood or oral fluid.

Overall, a smaller proportion of rural counties had an organization providing any of the nine HIV services as compared with urban counties, 74% versus 91%. In the most rural counties shown here as R2 in the figure, only 67% of the counties had an organization providing any of the nine HIV services. An availability of any of these services differed by census region. The Northeast had the highest service availability overall, and the differences between rural and urban counties were not significant. Service availability did differ between rural and urban counties in the three other regions, with the largest gaps seen in the Midwest and in the West.

We next looked at each service individually, starting with HIV testing services. A smaller proportion of rural counties had organizations providing HIV testing services as compared with urban counties, 69% versus 88%. In the most rural counties, only 61% of counties had an organization providing HIV testing services. We again looked by region and found no differences between rural urban counties in the Northeast, but differences in the Midwest, South, and in the West. Again, the largest gap was in the Midwest, with only 49% of rural counties reportedly having organizations that provide testing, as compared with 75% of urban counties.

Our next service indicator was the availability of PrEP, a daily medication that protects against HIV. While 55% of urban counties had organizations providing PrEP services, this number dropped to 12% overall for rural counties and 7% for rural noncore counties. When we looked at this by census region, a smaller proportion of rural counties in each region had an organization providing PrEP services as compared with urban counties. Finally, we looked at the availability of HIV AIDS prevention education. For this measure, we again see that the availability of these services in rural counties is less than in urban counties, 71% versus 88%. And rural-urban differences were not significant in the Northeast, but were significant in the Midwest, South, and in the West.

In conclusion, HIV prevalence in the availability of HIV related services varied across the rural urban continuum and U.S. census regions. Compared with urban counties, a smaller proportion of rural counties had organizations that provided HIV prevention, testing, and treatment services. And now I'll pass this presentation off to Amanda, who will discuss our third research projected related to HIV and HCV in rural areas in the U.S.

Per Ostmo: Katherine, Katherine, I'm going to interrupt here with a question. Were there any specific states, especially in the Midwest or West, that had egregiously significant disparities in terms of rurality?

Katherine Ahrens: For services or HIV prevalence?

Per Ostmo: Services.

Katherine Ahrens: Oh, we did not look at it by state, so we could do that. We just focused on the census regions.

Per Ostmo: Okay. Thank you.

Amanda Burgess: But if you do look up our chartbook product on Gateway, there are service maps at the county level that you can look at. Okay. So I'll get going. Could I have the next slide, please?

Katherine Ahrens: Yes. Does that work? Okay.

Amanda Burgess: Yes, perfect. Thank you. So I'm going to talk about a study that examined the capacity of rural public health departments to prevent, detect, and respond to an HIV or hepatitis C outbreak. This project had both a quantitative and qualitative component. And the quantitative policy brief was posted on the Gateway just a few months ago, so I recommend checking that out if this presentation piques your interest.

But today, I'm going to focus on the qualitative portion of the study, which explored the following research questions. What is the capacity of rural counties to prepare for, identify, and respond to an HIV or HCV outbreak? What challenges do rural communities face in addressing a potential outbreak? And what strategies are used to address those challenges? And before I dive in further, I'll just note that an article describing these findings in more detail is in press at the Journal of Health and Human Services Administration. And it should be released later this year in a special symposium issue focused on rural.

Next slide, please. Our first step was to identify a set of states from which to recruit key informants. The first two criteria that we used were one, being identified as a state potentially at risk for an HIV or HCV outbreak based on the quantitative policy brief that I mentioned, and two, having at least 20% of the state's population live in a rural area. From that group of states, we selected a final set of six states that represented all four U.S. census regions. And because the challenges that rural counties face may vary by public health governance structure in a state, our sample of states included at least one state from each public health governance classification. And those classifications are listed here.

They're defined by ASTHO, the Association of State and Territorial Health Officials and NORC, and they're, one, centralized, so that's a state in which state

employees lead local health departments and retain fiscal authority. The second structure is decentralized, which is also called home rule, in which the local health department retains authority over key decisions. The third is shared, where a local health department is led either by state or local government employees. And the fourth is mixed, in which no single state or local governance structure dominates.

Next slide, please. So our key informants were recruited from state health departments, rural local health departments, and rural community-based organizations. Informants included state and local public health officials such as directors of infectious disease programs, epidemiologists, and other public health surveillance staff, rural local health department staff, and leaders of community-based organizations such as AIDS service organizations, and also harm-reduction professionals.

We identified our first set of interviewees by reviewing state and local health department websites and publicly available reports related to HIV, HCV, or injection drug use. Those reports were epidemiological reports, strategic plans or community health needs assessments, for example. From those reports, we identified subject matter experts for initial interviews in our targeted states, and then those interviewees recommended other folks that we should speak with.

So between May and August 2019, we conducted interviews with 36 key informants. And we developed a semi-structured interview guide that focused on rural challenges, promising practices, the relationship between state and local public health organizations, and strategies related to outbreak preparedness and detection, outbreak investigation, and outbreak response. All these interviews were audio recorded, transcribed, and then imported into NVivo for thematic analysis.

Slide, please. One more slide. Okay, there, perfect. So through our analysis of transcripts, we identified five overarching challenges, funding and funding allocation, staffing, surveillance, access to testing and treatment, and resistance to harm-reduction services. So to keep to my time, I selected three themes to focus on that I think dovetail nicely with the work that Kate has already presented. And those are funding and funding allocation, access to testing and treatment, and resistance to harm-reduction services.

Slide, please. So many of the rural public health organizations that we spoke with lacked adequate funding to prepare for and respond to a potential HIV or HCV outbreak. Key informants described three subthemes related to funding, declining public health funding, funding favoring population sectors, and inadequate funding for HCV initiatives as compared to HIV programming. Regarding the first subtheme, key informants described decreased funding for public health as having eroded their capacity to prepare for and respond to an outbreak, particularly in rural areas. Reduced funding resulted in fewer public health staff, low salaries that challenge staff recruitment and retention, and limited resources such as testing materials.

Slide, please. Key informants attributed the lack of funding in rural areas to federal funding formulas and state funding decisions that favored population centers. They described federal funds being allocated to areas with higher population density, leaving rural communities with fewer resources to address public health needs. In addition, needed funding and other resources, such as rapid HIV tests, were not available in some rural areas because state resource allocations were targeted to more populous communities. In addition to the rural-urban public health funding disparities, several key informants noted that rural counties had fewer funds and resources to address HCV than HIV, even in areas that were particularly burdened by HCV.

Several key informants pointed out the relative lack of federal and state funding to support HCV treatment access, surveillance, and prevention activities as compared with HIV-related public health activities. And they noted that those resource limitations challenged rural communities' ability to prepare for, detect, and respond to a potential HCV outbreak.

Slide, please. Key informants described nimble and creative fundraising strategies in the face of these funding shortages. One local key informant described an effort in their rural community. When funding for a local recovery center was eliminated, members of the community quickly organized to identify funding, resources, and an administrative structure to maintain the center. The key informant shared the quote I put on this slide, quote, "As much as we were challenged with some of our rurality, I do think that some of the community that comes with the rurality can be a powerful part of the solution," end quote.

Key informants also described organizations integrating their HCV response into existing, more robust HIV programming and infrastructure. For example, one state sought funding to incorporate HCV screening into its existing HIV outreach programs. Slide, please. Key informants identified access to screening and treatment as essential to HIV and HCV outbreak detection and control. And they described challenges to ensuring access for rural at-risk populations. Challenges to testing and treatment access included limited health infrastructure, clinician shortages, stigma, and HCV treatment restrictions in state Medicaid policies.

Lack of clinics and hospitals in rural areas create a challenge for both local health departments and those seeking testing and treatment services. Local health departments couldn't draw on local clinical capacity to augment their testing services, and in many cases, patients had to travel long distances for their care, as illustrated by the two quotes on this slide. In the same vein, clinician shortages were identified as barriers to testing and treatment. One informant from a local health department noted that their local private primary care provider, quote, "Will try to link folks to care if they find out they're hepatitis C positive, but they don't have the capacity to care for their patients," end quote.

Next slide, please. Key informants in all six of the study states described challenges reaching rural persons who inject drugs, so that they can be tested,

and if needed, treated for HIV or HCV. The most commonly identified barrier was stigma, which contributed to the reluctance of persons who inject drugs to get tested locally for fear of a lack of anonymity. This concern was particularly acute in rural areas with limited testing and treatment options.

Key informants from several states noted state Medicaid, and in some cases, clinician or program specific policies that posed a barrier to treating patients with HCV. Specifically, key informants mentioned sobriety requirements for both rehabilitation and HCV treatment, as well as fibrosis staging requirements for HCV treatment. Describing challenges getting their clients into a rehabilitation program, one key informant shared, quote, "The biggest challenge was the fact that somebody had to be sober for seven days before they could get into the program."

Slide, please. Key informants described a mix of strategies to improve access to testing, as well as uptake of testing and treatment among affected populations. These included telehealth, community outreach, including community health workers and mobile units, service integration, and patient navigation. Key informants described telehealth being used to train or support rural clinicians so they could deliver specialty care needed for HCV and HIV and provide medication for addiction treatment, or MAT. Key informants also described new federal funding in support of telehealth enabled MAT services as a facilitator to increase treatment outtake among persons who inject drugs.

Next slide, please. Key informants in many states mentioned outreach to affected populations through community-based organizations, community health workers, or mobile units as an essential part of ensuring access to testing and treatment. Community outreach workers were deployed to areas where affected populations could be reached and where injection drug use was more prevalent. Several key informants emphasized the importance of partnering with community health workers or other community-based organizations that already have relationships with individuals who inject drugs because they've already built that trust and can encourage folks to get tested and get into treatment.

Key informants in several states viewed mobile clinics as a promising strategy. Some mobile clinics that were described were full-service health centers, while others focused on syringe exchange or other harm-reduction services. Service integration, co-location of services, and patient navigation were also identified as means of improving access among at-risk rural populations. Several key informants described connections to local emergency departments. For example, in one state, recovery coaches were positioned in emergency departments to help navigate patients to testing and treatment.

Next slide, please. So the last theme I'll cover is resistance to harm-reduction services. Several key informants commented on the difficulty of establishing harm-reduction programs, including syringe service programs or SSPs. Approval processes for establishing an SSP varied widely depending on location and state

public health governance structure. Among states with a decentralized public health governance structure, the process often involved working with local boards of health as well as state, county, and municipal governments. There was variation across states, counties, and even municipalities in the policies regulating the items that SSPs could distribute, where they could be located, and other aspects of program design. For example, if there is a one-for-one, or needs based needle exchange model, if there are caps on the number of syringes that could be distributed, or if there were residency requirements for SSP clients.

Key informants share that in many instances, the officials approving SSPs and developing SSP regulations did not have a public health background. Key informants also described law enforcement resistance to harm-reduction services during both the SSP approval process and after SSPs were established. While discussing the efforts of a sheriff's department to curtail the establishment of SSPs, a state-level key informant shared, quote, "In some counties, they've been successful in preventing the establishment of a syringe exchange program. It's seen as a drug problem, not a public health problem," end quote.

Two local key informants identified the presence of law enforcement outside of SSPs as a deterrent to service use. Quote, "If you don't have a good relationship with local law enforcement, they sit outside a syringe exchange, and then no one comes," end quote. Slide, please. Many key informants described efforts to increase acceptance of harm-reduction practices by educating stakeholders and community members about services provided by SSPs and the impact of stigma related to HIV, HCV, injection drug use, and MAT. Harm-reduction trainings for police officers, particularly ones led by retired law enforcement professionals, were identified as a promising practice.

Slide, please. One key informant stressed the importance of cultivating a champion with political clout to support and lobby for the establishment of an SSP, including advocating for changes in laws and regulations when they hamper the establishment of an SSP. Several key informants emphasize the importance of including a wide range of community stakeholders in the planning process, including religious leaders, EMS, law enforcement, mayors, county commissioners, and other elected officials.

Key informants from states with a centralized public health governance structure described centralization as a facilitator of SSP establishment, as illustrated by the quote on this slide, quote, "Given that we can provide harm reduction services in our health offices, we can operate regardless of a location's political environment," end quote.

Slide, please. So in conclusion, we find that rural public health organizations faced funding challenges, limited access to local HIV and HCV testing and treatment options, and stakeholder and community resistance to evidence-based public health approaches. Rural communities were using a variety of

innovative approaches to address these challenges and prepare for the threat of an infectious disease outbreak.

Slide, please. And so now we just want to recognize our co-authors, who are listed here. Erika Ziller, the director of the Maine Rural Health Research Center, Karen Pearson, Kristin Palmsten, Lauren Rossen, Martha Elbaum Williamson, Jaclyn Janis, Jennifer Lenardson, and Louisa Munk. So now we are going to open it up for questions.

Per Ostmo: Thank you, Katherine, and thank you, Amanda. We'll pause briefly for questions, and people can think about what they want to ask. But now I'm going to show everybody how to use the Rural Health Gateway website. I'm going to hijack your screen. Okay. So this is the Rural Health Research Gateway website. We provide easy and timely access to research conducted by the Rural Health Research Centers funded by the Federal Office of Rural Health Policy.

So if you'd like to learn more about any one of these Centers, you can click on the about us tab, and click on Rural Health Research Centers. Here, you will find a list of all the Centers whose research is disseminated by Gateway, and Maine is right at the top. If you want to learn more about any one of these Centers, just click on the hyperlink and you'll be taken to that Center's homepage.

But if you would like to access free research on Gateway, you can click on the browse research tab. And there are several options available. You can search by all publications, current projects, completed projects. You can even search by individual researchers. But today, we're going to click on topics. On this page, you can see sorted alphabetically all of the categories that Gateway has. And let's search for social determinants of health. We'll click on the letter S and click on social determinants of health.

On this page, you can see that there are 27 research products and journal articles on this topic. You can also access quick links to previous one-page recaps on the topic, and quick links to archived webinar recordings on the topic. But let's look at these 27 research articles. On this page, you'll see all of them listed by date, with the newest products at the top. We also allow you to filter the products. Journal articles are sometimes hidden behind a paywall, so you can filter those out. Products are all freely accessible and include policy briefs, fact sheets, reports, chartbooks, infographics, et cetera.

So here we have the Maine, the product from Maine, Rural HIV Prevalence and Service Availability in the United States. If you want to access this product, just click on the link. There will be a brief synopsis and a link to view the chartbook. You can see this product was developed by the University of Southern Maine, and there's a blue download link here to access the PDF.

Now another way to stay up to date on research is the Gateway research alerts. If you click on the research alert tab, you'll have the option to enter your name

and email to subscribe to our listserv. And that means that whenever any of the Rural Health Research Centers publish new research, you'll be emailed with a link to access that research for free. If you subscribe, you can expect between two and five emails per month. Also, if you like to see rural health research as you scroll through social media, you can follow us on Facebook and Twitter at RHR Gateway. So that's a brief overview of how to access research on Gateway. I'll pause for a moment in case there are any questions.

Amanda Burgess: And there was a question a bit earlier during Kate's presentation, about exactly what organizations are included in the NPIN database, as far as testing options. And to the question, they do include public health departments. They also include AIDS service organizations, clinics, hospital and social service organizations as well. And they also include commercial clinics, if they have a partnership with a state or local health department to offer these types of services.

Per Ostmo: Thank you, Amanda. Okay, if there are no further questions, I would like to thank everybody for joining us today. And thank you to Amanda and Katherine, thank you to the Maine Rural Health Research Center. And everyone, have a pleasant afternoon.